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C. F. Freyer's *Neuere Beiträge zur Schmetterlingskunde mit Abbildungen nach der Natur* was published in seven volumes, comprising 120 Hefte or parts, over a period of 28 years. Original wrappers of the Hefte are preserved in one of the copies examined; those of the first third lack publication dates, but these have been established with reasonable accuracy from evidence obtained from literature contemporary with Freyer's work. A collation of the seven volumes is provided and includes the publication date of each Heft. Biographical notes briefly describe Freyer's life and background. The annex consists of a check-list of species of the genus *Zygaena* Fabricius which were described, illustrated or mentioned by Freyer, and includes 10 nominal taxa attributable to him.

C. F. Freyer's seven-volume work entitled *Neuere Beiträge zur Schmetterlingskunde mit Abbildungen nach der Natur* comprises 120 Hefte which were published in Augsburg from 1831–1858. Each volume contains descriptions of the adults, early stages and foodplants of Palaearctic butterflies and moths which are illustrated in 700 beautiful hand-coloured plates. These plates, which are remarkably consistent in quality between the different copies examined, were executed by Freyer himself who paid great attention to detail and accuracy and commented that the figures of the larvae and foodplants were based on living material collected in the wild. A portrait of Freyer (Fig. 1) is reproduced from an original by Hanfstaengl and forms the frontispiece to volume 1.

Five complete copies of this rare work have been examined: three in the Entomology Library, British Museum (Natural History), one ex libris H. T. Stainton and now in the library of the Royal Entomological Society, London, and one ex libris L. G. Higgins, now in the Hope Library, University Museum, Oxford. Of the three copies in the British Museum

(Natural History), one is ex libris Lord Walsingham, another ex libris Lord Rothschild, the last is the 'original' British Museum (Natural History) copy from an unknown source.

The last-mentioned copy is the most interesting because an almost complete set of original wrappers from each Heft are bound together and included at the end of volume 7; only the wrappers of Hefte 1 and 3 are missing. The Heft and plate numbers have been added, in contemporary handwriting (Fig. 5), to the wrappers of Hefte 2, 4–58, 66, 71, 74 and 80; however, on each wrapper of Hefte 59–65, 67–70, 72, 73, 75–79 and 81–120 the number of the Heft, the numbers of the plates contained in that Heft, and its date of publication, are part of the original printing (Fig. 6). One discrepancy must be noted: the wrapper of Heft 24 is an original of Heft 117 and bears the printed date '1857', but the Heft number has been crossed out and bears the handwritten number '24', while the plate numbers have been altered to '139–144'.

Copies of Freyer's *Neuere Beiträge* in which the original wrappers are preserved must be very rare indeed. For example, Hagen (1862: 251) merely cites the title-page date for each volume. Sherborn (1922: lvi) rather surprisingly lists only volumes 1–6, which he dates 1831–1852, and states that the 'Dates can be made out from Isis and Arch. f. Nat.', thus implying that he had not seen volume 7 and the included original wrappers of the copy described above, especially as some of his manuscript dates are pencilled on slips of paper and attached to the title-pages of volumes 1–6. Some of these dates and those cited in *Index Animalium* are at variance with those printed on the wrappers, moreover, it is significant that no handwritten notes concerning the Heft numbers and their dates of publication were attached by Sherborn to the title-page of volume 7. Junk (1926: 130) dates the whole of Freyer's work 1833–1858; although he gives (1831–) 1833 for volume 1, he cites only the title-page dates for the remaining volumes. Junk also states that copies of Freyer's *Neuere Beiträge* are very rare. Horn & Schenkling (1928: 382–383) cites the title-page date for each volume, while Nissen (1969: 150) dates the whole work (1831–) 1833–1858, and refers to Horn & Schenkling and Junk.

As far as I know, Heppner (1982: 94) is the only person who has attempted to clarify and establish the publication dates of the 120 Hefte which make up the seven volumes of Freyer's *Neuere Beiträge*. Unfortunately, Heppner's collation is not only confusing but, together with some of the dates that he provides, is sometimes incorrect. For example, he cites groups of page numbers for volumes 2–6 without relating them to the Hefte and, in so doing, splits most of the Hefte of these volumes. In some cases two different dates are thus provided for parts of one and the same Heft. Moreover, he states that no wrapper dates are available for the Hefte of volume 7, thereby implying that he had seen wrappers for volumes 1–6. However, he neither describes the copy or copies that he has examined, nor does he provide any information on their depository. Heppner's statement that the plates are undated is also confusing – while it is true that they are not individually dated, they are, like the text, clearly associated with their respective wrappers. Apart from the fact that the plate numbers are recorded on the wrappers, each plate is also referred to in the text, and the relevant Heft number appears in the top left-hand corner on each plate (Fig. 4).

### The undated Hefte recorded in contemporary literature

As noted by Sherborn (1922: lvi), the dates of the Hefte can be ascertained from contemporary literature. For the purposes of this paper, a search has been made only for the period 1832–1844 in order to establish the dates of those Hefte which have undated wrappers; the printed dates on the wrappers of Hefte 59–65, 67–70, 72, 73, 75–79 and 81–120 are accepted as being correct.

#### Hefte reviewed or recorded in *Isis von Oken*

Hefte 1–4, dated 1831: Anonymous, 1832, *Isis*, Leipzig 1832 (7): 753–755.

Hefte 5, 6, dated 1831: Anonymous, 1833, *Isis*, Leipzig 1833 (9): 906.

Hefte 10–15, dated 1832, Heft 16, dated 1833: Anonymous, 1834, *Isis, Leipzig* **1834** (3): 316–317.  
 Heft 17, not dated: Boie, 1834, *Isis, Leipzig* **1834** (4): 384–385.  
 Hefte 17–20, dated 1833, Hefte 21–24, dated 1834: Anonymous, 1835, *Isis, Leipzig* **1835** (2): 115–116.  
 Hefte 25–30, dated 1835: Anonymous, 1835, *Isis, Leipzig* **1835** (11): 996.  
 Hefte 31–36, dated 1856 [*sic* – *recte* 1836]: Anonymous, 1837, *Isis, Leipzig* **1837** (2): 116.  
 Hefte 37–40, not dated: Anonymous, 1837, *Isis, Leipzig* **1837** (11): 837–838.  
 Hefte 41–44, dated 1837: Anonymous, 1838, *Isis, Leipzig* **1838** (5): 374.  
 Hefte 45–48, dated 1838–1839: Anonymous, 1839, *Isis, Leipzig* **1839** (3): 227.  
 Hefte 49–52, dated 1839: Anonymous, 1840, *Isis, Leipzig* **1840** (4): 302–303.  
 Hefte 53, 54, dated 1840: Anonymous, 1840, *Isis, Leipzig* **1840** (4): unpaginated contents list, etc.  
 Hefte 57–60, dated 1840: Anonymous, 1841, *Isis, Leipzig* **1841** (4): unpaginated contents list, etc.  
 Hefte 57–60, dated 1841: Anonymous, 1841, *Isis, Leipzig* **1841** (10): 815–816.  
 Hefte 65, 66, dated 1842: Anonymous, 1843, *Isis, Leipzig* **1843** (2): 154.  
 Hefte 71–74, dated 1843 and 1844: Anonymous, 1844, *Isis, Leipzig* **1844** (12): 941–942.

### Hefte recorded in *Archiv für Naturgeschichte*

The dates cited by Burmeister and Erichson in *Archiv für Naturgeschichte* are often later than those recorded anonymously in *Isis von Oken*; most are probably incorrect or unreliable.

Hefte 1–16, 17–22 (Hefte 21, 22 dated 1834 by inference): Burmeister, 1835, *Arch. Naturgesch.* **1** (2): 53.  
 Hefte 23–27, dated 1835: Burmeister, 1836, *Arch. Naturgesch.* **2** (2): 316.  
 Hefte 28–34, dated 1836: Erichson, 1837, *Arch. Naturgesch.* **3** (2): 324.  
 Hefte 35–37, dated 1837: Erichson, 1838, *Arch. Naturgesch.* **4** (2): 248.  
 Hefte 38–44, dated 1838: Erichson, 1839, *Arch. Naturgesch.* **5** (2): 361.  
 Hefte 45–50, dated 1839: Erichson, 1840, *Arch. Naturgesch.* **6** (2): 295.  
 Hefte 51–56, dated 1840: Erichson, 1841, *Arch. Naturgesch.* **7** (2): 221.  
 Heft 57, dated 1841: Erichson, 1842, *Arch. Naturgesch.* **8** (2): 285, 288, 289.  
 Hefte 58–68, dated 1842: Erichson, 1843, *Arch. Naturgesch.* **9** (2): 246.

### Miscellaneous references to Hefte

Sodoffsky (1837, *Bull. Soc. imp. Nat. Moscou* **1837** (7): 112) recorded that 38 Hefte, i.e. volumes 1, 2 and part of 3, had appeared and dated the whole work 1831!

Freyer (1841, *Stettin. ent. Ztg* **2**: 48) advertised Hefte 1–60 which he dated 1833–1841. Subsequently, Freyer (1876, *Dt. ent. Z.* **20** (3): 15) stated that his *Neuere Beiträge* was still available and dated it 1833–1868 [*sic*].

### Collation and dates of volumes 1–7

The dates of publication of Hefte 1–58, 66, 71, 74 and 80 have been established primarily on evidence culled from contemporary literature; for the remaining Hefte the dates printed on the wrappers are accepted as being correct. Each volume contains an undated, unpaginated index which, in most of the copies examined, is bound in after the title-page. It is assumed that an index and title-page were always issued together with the last Heft of each volume, therefore the date of publication of each index has been established from the title-page date. In the following collation, a date is enclosed in parentheses 'if it is not specified, but demonstrated by evidence derived from the work itself;', or in square brackets 'if it is demonstrated only by external evidence.' (*International Code of Zoological Nomenclature*, 3rd edn (1985), Recommendation 22A (4), (5)).

Volume 1: title-page and verso, pp. [i]–[ii] (index), i–iv, 5–182, pls 1–96 ([1831]–1833).

Heft	pages	plates	date
1	i–iv, 5–12	1–6	[1831]
2	13–24	7–12	[1831]
3	25–34	13–18	[1831]
4	35–46	19–24	[1831]
5	47–56	25–30	[1831]
6	57–68	31–36	[1831]
7	69–80	37–42	[1831] <sup>1</sup>
8	81–96	43–48	[1832] <sup>1</sup>
9	97–108	49–54	[1832] <sup>1</sup>
10	109–116	55–60	[1832]
11	117–124	61–66	[1832]
12	125–136	67–72	[1832]
13	137–146	73–78	[1832]
14	147–154	79–84	[1832]
15	155–162	85–90	[1832]
16	163–182	91–96	[1833]
Frontispiece			1833
Title-page			1833
Index	[i]–[ii]		(1833)

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1) The dates cited above for Hefte 7–9 are arbitrary as I have been unable to establish them from evidence in contemporary literature. On p. 79 (Heft 7), Freyer published a note written by Büringer in November 1831, and Sherborn has dated Heft 7 ‘1831’ in his manuscript notes attached to the title-page of volume 1. The nominal taxon *Plusia ancora* Freyer, described on p. 89 (Heft 8), is dated ‘1832’ by Sherborn (1923: 302). Of interest is a reference by Freyer on p. 102 (Heft 9) to ‘May h. J. (1831)’, i.e. May of this year, but this does not necessarily mean that Heft 9 was published in 1831; Sherborn has dated Hefte 8 and 9 ‘1832’ in the aforementioned manuscript notes. In the absence of evidence to the contrary, the publication dates of Hefte 7–9 are therefore based on those of Sherborn.

Volume 2: title-page and verso, pp. [i]–[ii] (index), i–ii, 3–162, pls 97–192 ([1833]–1836).

Heft	pages	plates	date
17	i–ii, 3–12	97–102	[1833]
18	13–22	103–108	[1833]
19	23–32	109–114	[1833]
20	33–42	115–120	[1833]
21	43–54	121–126	[1834]
22	55–62	127–132	[1834]
23	63–74	133–138	[1834]
24	75–84	139–144	[1834]
25	85–96	145–150	[1835]
26	97–104	151–156	[1835]
27	105–112	157–162	[1835]
28	113–120	163–168	[1835]
29	121–128	169–174	[1835]
30	129–138	175–180	[1835]
31	139–148	181–186	[1836]
32	149–162	187–192	[1836]
Title-page			1836
Index	[i]–[ii]		(1836)



Volume 3: title-page and verso, pp. [i]–[ii] (index), 1–134, pls 193–288 ([1836]–1839).

Heft	pages	plates	date
33	1–10	193–198	[1836]
34	11–20	199–204	[1836]
35	21–28	205–210	[1836]
36	29–36	211–216	[1836]
37	37–44	217–222	[1837] <sup>2</sup>
38	45–52	223–228	[1837] <sup>2</sup>
39	53–60	229–234	[1837] <sup>2</sup>
40	61–68	235–240	[1837] <sup>2</sup>
41	69–76	241–246	[1837]
42	77–84	247–252	[1837]
43	85–92	253–258	[1837]
44	93–100	259–264	[1837]
45	101–108	265–270	[1839] <sup>2</sup>
46	109–116	271–276	[1839] <sup>2</sup>
47	117–126	277–282	[1839] <sup>2</sup>
48	127–134	283–288	[1839] <sup>2</sup>
Title-page			1839
Index	[i]–[ii]		(1839)

2) Sherborn has given '1837' as the publication date of Heft 37 in his manuscript notes which are attached to the title-page of volume 3; presumably this is based on the records published by Erichson (see p. 3) and is accepted here in the absence of any other evidence. In the same notes Sherborn has dated Hefte 38–44 '1838'; however, Heft 38 must have been published not later than 1837 as in that year Sodoffsky (see p. 3) recorded that 38 Hefte had been issued. As there is evidence that Heft 41 was published in 1837, it follows that Hefte 39 and 40 were also issued in that year. Hefte 45–48 are dated '1839' in the afore-mentioned manuscript notes, the date presumably being based on Erichson's records. It is logical to assume that Heft 48 was published in 1839 as presumably it was issued with the title-page which bears that date.

Volume 4: title-page and verso, pp. [i]–[ii] (index), i–ii, 3–167, pls 289–384 ([1839]–1842).

Heft	pages	plates	date
49	i–ii, 3–12	289–294	[1839]
50	13–22	295–300	[1839]
51	23–30	301–306	[1839]
52	31–38	307–312	[1839]
53	39–48	313–318	[1840]
54	49–58	319–324	[1840]
55	59–68	325–330	[1840] <sup>3</sup>
56	69–80	331–336	[1840] <sup>3</sup>
57	81–92	337–342	[1841] <sup>3</sup>
58	93–102	343–348	[1841] <sup>3</sup>
59	103–116	349–354	1841
60	117–124	355–360	1841
61	125–136	361–366	1841
62	137–146	367–372	1841
63	147–156	373–378	1842
64	157–167	379–384	1842
Title-page			1842
Index	[i]–[ii]		(1842)

3) The dates of publication of Hefte 55–58 are enigmatic. Hefte 55 and 56 were recorded by Erichson and dated '1840' (see p. 3); the same date is given by Sherborn in his manuscript notes attached to the title-page of volume 4, and presumably was based on the evidence

supplied by Erichson. Hefte 57 and 58 are dated '1840' on the back of the wrapper of Heft 4 of *Isis von Oken* (1841) but are dated '1841' by the anonymous reviewer on p. 815 of the same journal (see p. 3). In 1842 Erichson recorded Heft 57 and dated it '1841', but in 1843 Hefte 58–68 were recorded by him and dated '1842' (see p. 3). The wrappers of Hefte 59–62 bear the printed date '1841', thus indicating that Erichson's citation of dates cannot be relied upon. In the afore-mentioned manuscript notes of Sherborn, Heft 57 is dated '1841', and Hefte 58–64 are dated '1842'; it therefore appears that Sherborn also based these dates on those of Erichson. In view of what has just been said, the establishment of the publication dates of Hefte 55–58 is arbitrary. However, based on such evidence, the date of Hefte 55 and 56 is considered to be 1840, and that of Hefte 57 and 58 to be 1841 (the latter date is based on the anonymous review in *Isis von Oken* as the dates provided in those reviews are more consistent and logical).

Volume 5: title-page and verso, pp. [i]–[ii] (index), i–ii, 3–166, pls 385–480 (1842–1845).

Heft	pages	plates	date
65	i–ii, 3–14	385–390	1842
66	15–24	391–396	[1842] <sup>4</sup>
67	25–32	397–402	1842
68	33–44	403–408	1843
69	45–52	409–414	1843
70	53–62	415–420	1843
71	63–74	421–426	[1843] <sup>4</sup>
72	75–86	427–432	1844
73	87–96	433–438	1844
74	97–106	439–444	[1844] <sup>4</sup>
75	107–116	445–450	1844
76	117–124	451–456	1845
77	125–134	457–462	1845
78	135–144	463–468	1845
79	145–156	469–474	1845
80	157–166	475–480	(1845) <sup>4</sup>
Title-page			1845
Index	[i]–[ii]		(1845)

4) The wrappers of Hefte 66, 71, 74 and 80 are of the kind shown in Fig. 5, i.e. they lack dates and the Heft and plate numbers have been added in contemporary handwriting. However, the publication dates of Hefte 66 and 74 must be 1842 and 1844 respectively, because the wrappers of Hefte 65 and 67 bear the date 1842 and those of 73 and 75 are dated 1844. It is assumed that Heft 80 was published in 1845 together with the title-page which bears that date. The date of Heft 71 is enigmatic as the wrapper dates of Hefte 70 and 72 are 1843 and 1844 respectively. The nominal taxon *Lycaena balkanica* Freyer, described on p. 63 (Heft 71), is dated 1844 by Sherborn (1924: 645) who also gives the same date for Heft 71 in his manuscript notes attached to the title-page of volume 5. However, Hefte 71–74 were reviewed in *Isis von Oken* (see p. 3) and dated 1843 and 1844; Heft 71 must therefore have been published in 1843 and this date is accepted here. The dates of Hefte 65, 66 and 71–74 that are cited in *Isis von Oken* (see p. 3) also confirm the dates established above for Hefte 66 and 74. It is possible that wrappers bearing printed dates were also issued and are still extant; however, until such wrappers are discovered, the dates for these Hefte should be placed in square brackets.

Volume 6: title-page and verso, pp. [i]–[ii] (index), 1–106, 105–168, 177–195, pls 481–600 (1846–1852).

Heft	pages	plates	date
81	1–12	481–486	1846
82	13–20	487–492	1846
83	21–28	493–498	1847
84	29–36	499–504	1847
85	37–48	505–510	1847
86	49–60	511–516	1847
87	61–68	517–522	1848
88	69–78	523–528	1848
89	79–88	529–534	1849
90	89–96	535–540	1849
91	97–106	541–546	1850
92	105–112 <sup>5</sup>	547–552	1850
93	113–120	553–558	1850
94	121–130	559–564	1850
95	131–142	565–570	1851
96	143–152	571–576	1851
97	153–160	577–582	1851
98	161–168	583–588	1851
99	177–186 <sup>5</sup>	589–594	1852
100	187–195	595–600	1852
Title-page			1852
Index	[i]–[ii]		(1852)

5) The pages of Heft 91 are numbered 97–106, while those of Heft 92 are numbered 105–112, moreover, those of Heft 99 are numbered 177–186 and do not follow on from those of Heft 98. The plates associated with these Hefte are correctly numbered and it is the pagination which is incorrect, thus giving the impression that some pages are missing.

Volume 7: title page and verso, pp. [i]–[ii] (index), 1–178, pls 601–700 (1853–1858).

Heft	pages	plates	date
101	1–12	601–605	1853
102	13–20	606–610	1853
103	21–28	611–615	1853
104	29–38	616–620	1854
105	39–46	621–625	1854
106	47–54	626–630	1854
107	55–62	631–635	1854
108	63–70	636–640	1854
109	71–78	641–645	1855
110	79–86	646–650	1855
111	87–96	651–655	1856
112	97–104	656–660	1856
113	105–114	661–665	1856
114	115–124	666–670	1856
115	125–132	671–675	1856
116	133–142	676–680	1857
117	143–150	681–685	1857
118	151–158	686–690	1857
119	159–168	691–695	1858
120	169–178	696–700	1858
Title-page			1858
Index	[i]–[ii]		(1858)

## Biographical notes on C. F. Freyer

Christian Friedrich Freyer (Fig. 1), the eldest son of Georg Ludwig Freyer and Henrike, *née* Meyer, was born in Wassertrüdingen, Bavaria, on 25 August 1794 and died in Augsburg on 10 November 1885 (Wulzinger, 1887). After his education at the local elementary and grammar schools he was employed as an administrator at Schloss Colberg in Ansbach and in 1820 took up a similar post in Augsburg where he lived for the remainder of his life. His wife Caroline, *née* Pluntky, whom he married in 1821, was from Ansbach and they had six children.

As a child Freyer was interested in natural history, especially entomology, and had already formed a small collection. In later years he collected with tireless enthusiasm during his spare time and on such occasions was supported and helped by his wife. He always attempted to recognize and identify the foodplants of the butterflies and moths that they found and, as he was interested in their early stages, he constructed rearing cages so that he could study their life histories more easily. He also exchanged specimens with other entomologists and his collection was distinguished by its size and neatness and the rarity of the species it contained.

Freyer's first major work to be published was *Beiträge zur Geschichte europäischer Schmetterlinge mit Abbildungen nach der Natur* which was issued in 24 pocket-sized Hefte from [1827]–1830 and formed three volumes. The publication of this work earned him recognition in the entomological world and resulted in correspondence with contemporary specialists at home and abroad. His *Neuere Beiträge zur Schmetterlingskunde mit Abbildungen nach der Natur*, the subject of the present paper, was his final major contribution to the entomological literature and is indeed the most important. In order to produce the best illustrations possible, he had learned the art of copper engraving and took pride in the fact that all his figures were drawn and painted by himself, moreover, those depicting the early stages were always based on living material and not copied from other people's work. Not only were his publications regarded with esteem by contemporary Lepidoptera specialists, but through his illustrations Freyer was also recognized as an artist. In addition to the two major works just mentioned, he published a number of short articles on Lepidoptera and a book on the pest species of butterflies and moths occurring in Germany.

In 1848 Freyer joined the local natural history society in Augsburg and later served on its council. He helped to build up the society's collection by donating specimens and eventually he became its curator. It is regrettable that Freyer's personal collection was split up after his death (Horn & Kahle, 1935: 82) as it contained much original material of the species that he had described and named himself. (Regarding the genus *Zygaena* Fabricius, only two syntypes have so far been traced (Tremewan, 1961: 282).)

Following the death of his wife in 1869, Freyer applied for retirement from the administrative service in the spring of 1870, having served the town of Augsburg for 50 years – he was already in his 76th year.

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## Annex

The bibliographical data provided above are a direct result of research which was done to establish the correct dates of publication of the nominal taxa described by Freyer in the genus *Zygaena* Fabricius, 1775 (Lepidoptera: Zygaenidae). A check-list of these taxa follows.

### Check-list of *Zygaena* Fabricius described, illustrated or mentioned by Freyer

This check-list comprises the nominal taxa described by Freyer in his *Neuere Beiträge zur Schmetterlingskunde mit Abbildungen nach der Natur*, volumes 1–7; those species which were described by other authors and illustrated or referred to by Freyer are also listed. No attempt has been made to establish the priority or validity of the names attributable to Freyer, as this will be dealt with in a forthcoming systematic catalogue of the Zygaeninae (Hofmann & Tremewan, in prep.). The nominal taxa are arranged chronologically in the check-list, i.e. in the order of their publication in Freyer's work. Names that are attributable to Freyer are marked with an asterisk (\*). The authority of taxa described by other authors is that referred to by Freyer and therefore is not necessarily correct; however, if Freyer cited such a taxon without an author, the latter is provided in square brackets and is either correct or the one that Freyer had used previously. The names of the taxa described by other authors which have been misspelt by Freyer are listed as originally cited by him and misspellings have not been corrected.

At the beginning of each species description, Freyer cited a genus number and the name of the genus in which he placed the species, followed by a species number and the name of the species; however, the species name is always prefixed by a genus name (abbreviated or in full) which is often different from that first cited and is one that was used by Linnaeus or other earlier authors. For example, the *Zygaena* species first listed and described by Freyer (1: 28) is cited as follows: 'Gen. XIX. *Zygaena*. 20. Sp[hinx]. *Oxytropis*.' At the XII International Congress of Zoology, Hemming (1936: 185) reported that the following Opinion had been adopted by the International Commission of Zoological Nomenclature: 'In interpreting the generic names assigned by FREYER in his *Neuere Beiträge zur Schmetterlingskunde* to the species there described, each species is to be regarded as having been described by FREYER as belonging to the genus cited by him at the head of each description and not to the genus with which he actually associated the specific name . . .'. For the purposes of homonymy the species listed below were therefore all described in *Zygaena* and not in *Sphinx* Linnaeus.

- \**Zygaena oxytropis* Freyer, [1831], 1: 28, pl. 14, fig. 2.  
*Zygaena cynarae* Hübner; Freyer, [1831], 1: 28, pl. 14, fig. 3.  
*Zygaena triptolemus* Hübner; Freyer, [1831], 1: 28, pl. 14, fig. 4.  
*Zygaena minos* Hübner; Freyer, [1832], 1: 156, pl. 86, fig. 1.  
*Zygaena hippocrepidis* Hübner; Freyer, [1832], 1: 157, pl. 86, figs 2, 3.  
*Zygaena triptolemus* Treitschke; Freyer, [1835], 2: 114, pl. 164, figs 1, 2.  
*Zygaena glycirrhiza* Hübner; Freyer, [1835], 2: 116, pl. 164, fig. 3.

- Zygaena cytisi* Hübner; Freyer, [1835], 2: 116, pl. 164, fig. 4.  
*Zygaena laeta* Hübner; Freyer, [1836], 3: 12, pl. 200, fig. 1.  
*Zygaena exulans* Hübner; Freyer, [1836], 3: 13, pl. 200, fig. 2.  
*Zygaena rubicundus* Hübner; Freyer, [1836], 3: 13, pl. 200, fig. 3.  
*Zygaena trifolii* Hübner; Freyer, [1836], 3: 14, pl. 200, fig. 4.  
*Zygaena dorycnii* Ochseneimer; Freyer, [1839], 3: 120, pl. 278, fig. 3.  
*\*Zygaena stentzii* Freyer, [1839], 3: 120, pl. 278, fig. 4.  
*Zygaena exulans* [Hübner]; Freyer, [1839], 3: 134.  
*Zygaena cynarae* Hübner; Freyer, 1841, 4: 106, pl. 350, fig. 1.  
*Zygaena carneolica* Esper; Freyer, 1841, 4: 107, pl. 350, fig. 2.  
*Zygaena sedi* Hübner; Freyer, 1841, 4: 107, pl. 350, figs 3, 4.  
*Zygaena stoechadis* Hübner; Freyer, 1841, 4: 138, pl. 368, figs 1-4.  
*\*Zygaena anthillidis* Freyer, 1842, 5: 27, pl. 398, fig. 3.  
*Zygaena achilleae* [Esper]; Freyer, 1843, 5: 44.  
*Zygaena glycirrhizae* [Hübner]; Freyer, 1843, 5: 44.  
*\*Zygaena oxytropis* Freyer; Freyer, 1843, 5: 44.  
*Zygaena hippocrepidis* Hübner; Freyer, 1843, 5: 44.  
*Zygaena onobrychis* [Denis & Schiffermüller]; Freyer, 1843, 5: 44.  
*Zygaena fausta* [Linnaeus]; Freyer, 1843, 5: 61.  
*Zygaena fausta* [Linnaeus]; Freyer, [1843], 5: 74.  
*\*Zygaena favonia* Freyer, 1844, 5: 76, pl. 428, fig. 1.  
*Zygaena loniceriae* Hübner; Freyer, 1844, 5: 108, pl. 446, figs.  
*Zygaena astragali* Borkhausen; Freyer, 1845, 5: 117, pl. 452, figs.  
*\*Zygaena pythia* Freyer, 1845, 5: 152, pl. 473, fig. 1.  
*\*Zygaena contamini* Freyer, 1847, 6: 39, pl. 506, fig. 1.  
*Zygaena dahurica* Boisduval; Freyer, 1847, 6: 39, pl. 506, fig. 2.  
*Zygaena syracusii* Zeller; Freyer, 1847, 6: 39, pl. 506, figs 3, 4.  
*Zygaena hippocrepidis* [Hübner]; Hepp in Freyer, 1849, 6: 88.  
*Zygaena fausta* [Linnaeus]; Hepp in Freyer, 1849, 6: 88.  
*\*Zygaena oribasus* Freyer, 1851, 6: 135, pl. 568, fig. 1.  
*\*Zygaena laphria* Freyer, 1851, 6: 135, pl. 568, fig. 2.  
*\*Zygaena ganimedes* Freyer, 1851, 6: 136, pl. 568, fig. 3.  
*\*Zygaena dsidsilia* Freyer, 1851, 6: 136, pl. 568, fig. 4.  
*Zygaena fausta* Treitschke; Freyer, 1851, 6: 154, pl. 578, figs.  
*Zygaena exulans* Hübner; Freyer, 1852, 6: 178, pl. 590, fig. 1.  
*Zygaena laeta* Hübner; Freyer, 1854, 7: 64, pl. 637, fig. 1.  
*Zygaena onobrychis* Hübner; Freyer, 1854, 7: 66, pl. 637, fig. 2.



C.F. FREYER.

**Fig. 1** A portrait of C. F. Freyer which forms the frontispiece to volume 1 of his *Neuere Beiträge zur Schmetterlingskunde*.

Neuere  
Beiträge  
zur  
Schmetterlingskunde  
mit  
Abbildungen nach der Natur.

herausgegeben von C. F. Freyer.



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Neuere  
Beiträge  
zur  
Schmetterlingskunde  
mit  
Abbildungen nach der Natur.

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Herausgegeben von C. F. Freyer.

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(J. P. Himmer.)

1858.



Fig. 4 Plate 578 of C. F. Freyer's *Neuere Beiträge zur Schmetterlingskunde*, volume 6, depicting the adult, early stages and foodplant of *Zygaena fausta* (Linnaeus).

Neuere  
Beiträge  
zur  
Schmetterlingskunde  
mit  
Abbildungen nach der Natur.

Herausgegeben von C. F. Freyer.

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Fig. 5 The wrapper of Heft 16 (volume 1, pls 91–96) of C. F. Freyer's *Neuere Beiträge zur Schmetterlingskunde*.

Abbildungen nach der Natur.

Herausgegeben von C. F. Freyer.

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1841.

**Fig. 6** The wrapper of Heft 59 (volume 4, pls 349–354) of C. F. Freyer's *Neuere Beiträge zur Schmetterlingskunde*.